



August 11, 2003

Mirant Potrero, LLC  
Attn: Mark Harrer, Project Director  
1350 Treat Boulevard, Suite 500  
Walnut Creek, CA 94596

Dear Mr. Harrer:

**POTRERO POWER PLANT UNIT 7 PROJECT DATA REQUESTS –SET 6  
COOLING TOWER SYSTEM AMENDMENT**

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project; 2) assess whether the facility will be constructed and operated in compliance with applicable regulations; 3) assess whether the project will result in significant environmental impacts; 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner; and 5) assess potential mitigation measures.

Enclosed are data requests in the areas of cultural resources, efficiency, hazardous materials, public health, reliability, socioeconomics, soil and water resources, visual resources, visual plumes, and waste management. Written responses to the enclosed data requests are due to the Energy Commission staff on or before September 11, 2003.

If you are unable to provide the information requested, need additional time to provide the information, or object to providing it, you should send a written notice to both Commissioner Robert Pernell and to me within 10 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please call me at (916) 653-1245.

Sincerely,

James W. Reede, Jr., Ed.D  
Energy Facility Siting Project Manager

Enclosure

cc: Potrero Power Plant Unit 7 Project Proof of Service List  
Docket (00-AFC-4)

**Potrero Power Plant Unit 7 Project (00-AFC-4)**  
**Data Requests**

**Technical Area: Cultural Resources**

**Author:** Gary Reinoehl and Roger Mason

**BACKGROUND**

Two sugar warehouses that have been evaluated as eligible under criterion 1 for the California Register of Historical Resources are located directly across 23<sup>rd</sup> Street from the proposed cooling tower location. This area of the power plant across 23<sup>rd</sup> Street from the sugar warehouses currently contains some small, low rise buildings within a paved parking area and the existing Station A. Station A includes a boiler room and turbine or generator room that are 65 feet tall, 121 feet wide and 434 feet long oriented in a north south direction, perpendicular to the proposed cooling tower. Under the Once Through Cooling Option analyzed in the AFC and FSA, this area would have remained relatively unchanged except for the removal of Station A. However, in the Cooling Tower Option now being considered, a tower structure 69 feet tall and 673 feet long would be built parallel with and 30 feet north of the property line along 23<sup>rd</sup> Street. The Amendment states that the analysis in the AFC was used "to determine the potential effects of the cooling tower system project on the two warehouses" and that the design of the cooling tower is of a scale that is consistent with the existing structures of the plant and neighboring industrial development. The analysis in the AFC included the planned retention of the few low rise buildings on the power plant property north of the warehouses and did not discuss the construction of the large cooling tower structure. In addition, the cooling tower would produce a visible plume 6.2 percent of the time. Staff needs additional information before it can agree with the applicant's conclusion that "the design of the cooling tower is of a scale that is consistent with the existing structures of the plant and neighboring industrial development and thus would not materially impair the physical characteristics that convey the significance of the two warehouses at 435 23<sup>rd</sup> Street."

**DATA REQUEST**

216. Please provide a detailed discussion by a qualified architectural historian of the changes in integrity of setting, feeling and association for the sugar warehouses that would result from construction and operation of the cooling tower as part of the proposed project, including whether the changes in integrity would materially impair the characteristics that convey the significance of the two warehouses.
217. If the significance of the two warehouses would be materially impaired, please provide mitigation measures and indicate whether the mitigation measures would reduce the impact to less than significant.

**BACKGROUND**

During the hearings for the Potrero Power Plant, the City and County of San Francisco provided background documents for the Central Waterfront Cultural Resources Survey. The survey suggested that an eligible Central Waterfront Industrial District exists within the survey boundary of Sixteenth Street, Interstate 280, Islais Creek Channel and San Francisco Bay. The Central Waterfront Industrial District includes the Pier 70 Historic District, the Dogpatch Historic District, and some buildings within the Potrero Power Plant parcel and the Spreckels Sugar Warehouses. The addition of the cooling tower

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would effectively segregate the area between 22<sup>nd</sup>, Illinois, and 23<sup>rd</sup> with large structures (tanks, substation and switching yard, power plants and cooling towers) that are modern intrusions into the middle of the district.

**DATA REQUEST**

218. Please provide a detailed discussion by a qualified architectural historian of the changes in Central Waterfront Industrial District that would result from construction and operation of the cooling tower as part of the proposed project, including whether the changes in integrity would materially impair the characteristics that convey the significance of the district.
219. If the significance of the Central Waterfront Industrial District would be materially impaired, please provide mitigation measures and indicate whether the mitigation measures would reduce the impact to less than significant

**BACKGROUND**

Although no archeological resources were identified as a result of the records search and field survey performed by the applicant for the pipeline routes needed for the Cooling Tower Option, it should be possible to identify potential subsurface resources that could be impacted by the pipeline construction. The 1899 Sanborn map suggests that portions of the pipeline would be placed in old land features, shoreline areas, and filled areas. Historical research and historic maps may indicate the locations of archeological resources along the pipeline route. An example of such a resource that could be impacted by the proposed pipeline is the San Francisco Cordage/ Tubbs Cordage ropewalk that appears on historic maps and is documented in several area historical resources inventories. In order to adequately identify potential impacts, staff needs additional information.

**DATA REQUEST**

220. Please provide a literature review and consult historic maps to identify potential subsurface cultural resources that could be impacted by the proposed pipelines. The literature review should include, but not be limited to, the following:

Potrero 7: Phase 1 Cultural Resources Overview and Inventory (Wirth Associates 1979);

Central Waterfront Cultural Resources Survey (San Francisco Planning Department 2001); and

Dogpatch Historic District Survey (Christopher VerPlanck 2001).

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**Technical Area: Efficiency**

**Authors:** Kevin Robinson, Steve Baker

**BACKGROUND**

In the AFC, it is stated that at full load the total average capacity of the plant will be approximately 540 net MW at a heat rate of less than 7,000 Btu per KWhr (SECAL 2000a, AFC § 1.4). The varying temperatures and humidity of the site location will affect the efficiency of the wet/dry cooling tower system which will ultimately affect the total efficiency of the power plant. The efficiency of the wet/dry cooling tower system will be affected by the varying weather conditions more than the once-through cooling system.

**DATA REQUEST**

221. Please discuss the impact of the upland cooling tower system (wet/dry plume-abated cooling tower) on the efficiency of the plant at typical weather conditions for the project site. Please also include a comparison between the once-through cooling system and the wet/dry cooling tower system.

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**Technical Area: Hazardous Materials**

**Author:** Alvin Greenberg, Ph.D.

**BACKGROUND**

Specific information on the chemicals stored and/or used on site for the hybrid cooling option and the frequency of their delivery is needed in order to assess the impacts of the hybrid cooling option from a hazardous materials management perspective.

**DATA REQUEST**

222. On page 2-2 of the July 2003 Cooling Tower System Amendment, it is stated that a wet-dry plume abated cooling tower system would include the following item as a major component:

“Scale and corrosion inhibitor chemical feed system, including storage tank, pumps, and pipes.”

Please provide the identity of all chemicals which are proposed for use in controlling scale and corrosion, their CAS numbers, the amount to be stored on-site, and a MSDS for each chemical.

223. Please provide the frequency of delivery of the chemicals listed on page 8.12-6 (Table 8.12-1) of the July 2003 Amendment. This frequency should be for deliveries above and beyond that proposed for the other operations of the power plant already addressed in the AFC.

**Potrero Power Plant Unit 7 Project (00-AFC-4)**  
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**Technical Area: Public Health**

**Author:** Obed Odoemelam, Ph.D.

**BACKGROUND**

The applicant proposes to use treated wastewater as one option for cooling at the proposed facility. Staff is concerned about the reliability of the procedure to ensure that the quality of the utilized water is maintained within the standards required under Title 22, section 60301 of the California Code of Regulations for disinfected tertiary recycled water.

**DATA REQUEST**

224. Please provide a water quality monitoring plan that describes how sampling and analysis would be accomplished under the requirements of Title 22, section 60321 of the California Code of Regulations to ensure the tertiary water quality standards specified.

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**Data Requests**

**Technical Area: Reliability**

**Authors:** Kevin Robinson, Steve Baker

**BACKGROUND**

The once-through cooling system that was first proposed in the AFC would have its water supplied by the San Francisco Bay which is a source of basically constant temperature and unlimited quantity. The varying weather conditions of the site may affect the reliability of the upland cooling tower system (wet/dry plume-abated cooling tower) with respect to the total load output.

**DATA REQUEST**

225. Please discuss the affects of the upland cooling tower system (wet/dry plume-abated cooling tower) on the reliability of the total power output. Include a comparison between the once-through cooling system and the upland cooling tower system.

**BACKGROUND**

The equipment differences between once-through cooling and the wet/dry cooling tower systems are stated in the Potrero Amendment section 2.1.1.

**DATA REQUEST**

226. Please compare the expected reliability of the once-through cooling system with the upland cooling tower system.

**Potrero Power Plant Unit 7 Project (00-AFC-4)**  
**Data Requests**

**Technical Area: Socioeconomics**

**Author:** Amanda Stennick

**BACKGROUND**

To determine the economic benefits of the proposed project amendment to the City and County of San Francisco, please provide the following.

**DATA REQUEST**

227. Please provide the estimated cost of purchasing 4.7 million gallons per day of secondary treated wastewater and the associated waste discharge fees to the City of San Francisco.

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**Data Requests**

**Technical Area: Soil and Water Resources**

**Author:** Mike Krolak

**BACKGROUND**

The project proposes to obtain secondary treated effluent from the Southeast Water Pollution Control Plant (SEWPCP), and return the blowdown and tertiary treatment sludge back to the SEWPCP. However, no evidence of confirmation of this arrangement is provided.

**DATA REQUESTS**

228. Please provide a will-serve letter to receive effluent from the SEWPCP. If a will-serve letter cannot be provided, please describe alternative sources of recycled cooling water.
229. Please provide a letter that confirms that the SEWPCP would accept waste streams from the Unit 7 project.

**BACKGROUND**

The project proposes to discharge cooling tower blowdown and tertiary treatment sludge to the City of San Francisco sewer system to be routed to SEWPCP. Water quality information is provided for the blowdown stream, but is not provided for the sludge. It is likely that other waste streams would be generated on site as well, such as equipment wash water. Staff requires full characterization of waste discharge.

**DATA REQUESTS**

230. Please provide characterization of all waste streams that would be discharged to the sewer system for treatment at the SEWPCP. Please provide characterization of these streams individually and as a combined waste stream that will account for full operation of the project. If some liquid waste streams would be discharged by other means, please describe the methods to be used.
231. Please provide an analysis of the combined waste discharge in relation to relevant water quality standards determined by the City of San Francisco to enable a discharger to receive an Industrial Wastewater Discharge permit.
232. Please provide details of the project's plan to assure compliance with City water quality standards, including any pre-treatment of waste streams that would be required. Please provide details of pre-treatment methods, as well as monitoring and recording efforts that would be required.
233. If the analysis shows that any City of San Francisco water quality standards would be exceeded by the project's combined wastewater discharge, or that an Industrial Wastewater Discharge permit is unlikely to be granted to the project, please provide an analysis of the feasibility of implementing a zero liquid discharge system as an alternative to the sewer disposal scheme. The analysis should include the effects on water use and waste discharge, economic impacts (capital and operating costs), plant efficiency and output, solid waste disposal and environmental impacts.

**Potrero Power Plant Unit 7 Project (00-AFC-4)**  
**Data Requests**

**Technical Area: Visual Resources**

**Author:** Michael Clayton

**BACKGROUND**

The Potrero Power Plant Project Cooling Tower System Amendment (Amendment) states that Pier 96 (10 acres) or Pier 80 (7 acres) may be used for the laydown area (p. 2-4).

**DATA REQUEST**

- 234. Please describe the types of equipment, structural components, vehicles, and other construction materials that may be present at the Laydown area.
- 235. Please describe the visibility of each potential laydown area, and the affected viewing population, particularly with respect to residential areas in Hunter's Point.
- 236. Please describe the impacts that equipment, components, and materials will have on views from surrounding areas.
- 237. Please describe any night lighting that would be required at the laydown area and the measures to control off-site visibility of the laydown area lights.
- 238. Please describe the existing night lighting conditions at the two candidate laydown areas.
- 239. Please describe the visibility of any necessary night lighting at the two laydown area sites.

**BACKGROUND**

The Amendment identifies the need for a pump station at the SEWCP and a secondary effluent pump station near the Flynn Pump Station (p. 2-7).

**DATA REQUEST**

- 240. Please describe the aboveground components that will comprise each pump station and list the dimensions of the major pump station components.
- 241. Please describe views of the pump station sites and identify the affected viewers.

**BACKGROUND**

The Amendment states that two of the three existing fuel storage tanks on-site would be converted into recycled water storage tanks (p. 2-9).

**DATA REQUEST**

- 242. Please clarify whether or not modification of the two tanks would change their outward appearance.

**Potrero Power Plant Unit 7 Project (00-AFC-4)**  
**Data Requests**

**BACKGROUND**

The Amendment states that pipeline construction would require either jack and bore or microtunneling techniques utilizing a jacking pit and a receiving pit for the crossing of large existing facilities (p. 2-12).

**DATA REQUEST**

243. Please describe the location(s) of any proposed jacking and receiving pits, their visual character, and the visibility of the pits from nearby roads, businesses, and residences.
244. Please identify the amount of time that each jack and bore/microtunneling site would be in use and visible.

**BACKGROUND**

The Amendment states that Warm Water Cove Park would potentially be affected by the wet/dry cooling tower (p. 8.11-3). Given the close proximity of the Park to the cooling tower and the tower's substantial size, it is important to accurately identify the potential visual impacts on visitors to the park.

**DATA REQUEST**

245. Please provide an 11" x 17" high-quality color photocopy of the existing view of the project site north from Warm Water Cove Park. Please also provide an 11" x 17" high-quality color photocopy of the proposed project with the wet/dry cooling tower from north from Warm Water Cove park. The images must be presented at life-size scale when held at a standard reading/viewing distance of 18 inches.

**BACKGROUND**

The existing view images and photosimulations presented in the Amendment for KOPs 1b, 2, and 3 are scaled 25 percent to 30 percent smaller than the life-size images presented in the Staff Assessment. It is important to present images of similar scale to facilitate the visual analysis of the wet/dry cooling option and its comparison to the proposed project.

**DATA REQUEST**

246. Please provide revised 11" x 17" versions of the images presented in Section 8.11 of the Amendment to achieve life-size scale when held at a standard reading/viewing distance of 18 inches. The images should appear in the same scale to those previously presented in the Staff Assessment.

**BACKGROUND**

The Amendment does not identify any changes to the night lighting scheme for the proposed project site

**Potrero Power Plant Unit 7 Project (00-AFC-4)**  
**Data Requests**

**DATA REQUEST**

- 247. Please identify any necessary night lighting for the wet/dry cooling system.
- 248. If additional night lighting is necessary for the wet/dry cooling system, please describe the visibility of that lighting from KOPs 1b, 2, 3, and Warm Water Cove Park.

**Potrero Power Plant Unit 7 Project (00-AFC-4)  
Data Requests**

**Technical Area: Visual Resources (Visual Plumes)**

**Author:** William Walters

**BACKGROUND**

In the Cooling Tower System Amendment the applicant has noted that they are going to use a plume abated cooling tower design; however, they have not provided sufficient technical specifications for the plume abated cooling tower, or a full description of the plume frequency modeling method they used to determine plume frequencies. Staff requires additional information regarding the plume abated cooling tower design and the applicant's plume frequency modeling approach in order to confirm the applicant's analysis.

**DATA REQUEST**

249. Please provide a plume fogging frequency curve for the specified plume abated tower design.
250. Please describe the methodology used to sort the meteorological data to determine which hours and total frequencies had the potential for a visible plume given in Table 8.11-1 of the Cooling Tower System Amendment.

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**Data Requests**

**Technical Area: Waste Management**

**Author:** Mike Ringer

**BACKGROUND**

Construction of the water treatment facility will necessitate additional excavation and the demolition of additional structures and associated hazardous and nonhazardous wastes. Excavated material could be classified as a hazardous waste requiring disposal at a landfill, depending on the concentrations of various constituents.

**DATA REQUESTS**

251. Please provide an estimate of the additional amount of material that would need to be excavated for construction of the water treatment facility, cooling tower and the offsite pump station located adjacent to the SEWPCP.
252. Please provide estimates of the amounts of hazardous and nonhazardous wastes that would be generated from the demolition of the additional buildings identified in the cooling tower amendment.
253. Please estimate the amounts of hazardous and nonhazardous construction-related wastes that would be generated from building the water treatment facility and cooling tower.